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EXAMINER	
GODBOLD, DOUGLAS	

ART UNIT	PAPER NUMBER
2626	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/781,714	CHOI, GOAN-MOOK	
	Examiner	Art Unit	
	Douglas C. Godbold	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *20051105*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to application 10/781,714 filed February 20, 2004. Claims 1-13 are pending in the application and have been examined.

Priority

2. This application claims benefit of Korean application 2003-69219 filed June 10, 2003. This priority date has been considered in this office action.

Information Disclosure Statement

3. The Information Disclosure statement filed November 8, 2005 have been considered in this office action.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 5, 6, and 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Applebaum et al. (US Patent 6,463, 413).

6. Consider claim 1, Applebaum teaches a mobile communication terminal (Figure 2, cell phone 60. It should be understood that the methods are the same for the cell phone of figure 2 and PDA of figure 1; see column 5 line 39.) comprising:

a display unit for displaying a character (display 68);

a voice input unit through which a speech sound is inputted (Microphone 62);

a storage unit for storing reference phoneme models of respective feature vectors of phonemes of the input speech sound (lexicon 24 stores word model and speech models, which may be HHM phoneme models; column 4, line 44.); and

a controller for segmenting the speech sound inputted for the displayed character (user may be prompted by utterances of the user supplied data; column 4 line 29, inputted into microphone 62) into the phonemes, extracting respective feature vectors from the phonemes (the user speaks the word for which the new speech reference model is desired. The system receives the user-supplied word as audio data via the microphone 18. Speech recognizer 22 converts the audio data into a digitized input signal and then into a parameterized intermediate form. In a preferred embodiment of the present invention, the intermediate representation of the word is a vector of parameters representing the short term speech spectral shape of the audio data; column 4 lines 16-24.), and generating and storing the reference phoneme models based on the extracted feature vectors respectively (The reference model server 40 passes the intermediate representation of the word to the reference model training module 50, where a speech model is constructed using the speech model template. To construct a speech model, the reference model training module 50 may decode the time

series of parameter vectors in the speech training data by comparison to a set of phonetic Hidden Markov Models, thereby obtaining a phonetic transcription of the utterance in the speech training data. In this case, the transcription serves as the speech reference model; column 4 lines 41-48. In the specification of this pending application, a Korean character is used. This can be an entire word, therefore word and character are interchangeable.).

7. Consider claim 2, Applebaum teaches the mobile communication terminal according to claim 1, further comprising a keypad for inputting a character to be displayed on the display unit (Figure 2, telephone includes keypad 66 for interesting numbers and other information and display screen for presenting information to the user, column 4 line 66- column 5 line 1.).

8. Consider claim 5, Applebaum teaches a phoneme modeling method comprising the steps of:

receiving an input speech sound corresponding to a displayed character (user may be prompted by utterances of the user supplied data; column 4 line 29, inputted into microphone 62);

segmenting the input speech sound into phonemes (this is inherent as the training is done using phonetic HHM models, column 4 line 44.);

extracting respective feature vectors from the phonemes (the user speaks the word for which the new speech reference model is desired. The system receives the

user-supplied word as audio data via the microphone 18. Speech recognizer 22 converts the audio data into a digitized input signal and then into a parameterized intermediate form. In a preferred embodiment of the present invention, the intermediate representation of the word is a vector of parameters representing the short term speech spectral shape of the audio data; column 4 lines 16-24.); and

generating and storing reference phoneme models based on the feature vectors respectively (The reference model server 40 passes the intermediate representation of the word to the reference model training module 50, where a speech model is constructed using the speech model template. To construct a speech model, the reference model training module 50 may decode the time series of parameter vectors in the speech training data by comparison to a set of phonetic Hidden Markov Models, thereby obtaining a phonetic transcription of the utterance in the speech training data. In this case, the transcription serves as the speech reference model; column 4 lines 41-48. In the specification of this pending application, a Korean character is used. This can be an entire word, therefore word and character are interchangeable.).

9. Consider claim 6, Applebaum teaches the method according to claim 5, further comprising the step of:

receiving an input character and displaying the character on a display unit (Figure 2, telephone includes keypad 66 for interesting numbers and other information and display screen for presenting information to the user, column 4 line 66- column 5 line 1.).

10. Consider claim 9, Applebaum teaches a voice recognition method (Using system of figure 1 and figure 2) comprising the steps of:

a) receiving an input speech sound corresponding to a displayed character (user may be prompted by utterances of the user supplied data; column 4 line 29, inputted into microphone 62);

b) generating and storing reference phoneme models of feature vectors corresponding respectively to phonemes of the speech sound (The reference model server 40 passes the intermediate representation of the word to the reference model training module 50, where a speech model is constructed using the speech model template. To construct a speech model, the reference model training module 50 may decode the time series of parameter vectors in the speech training data by comparison to a set of phonetic Hidden Markov Models, thereby obtaining a phonetic transcription of the utterance in the speech training data. In this case, the transcription serves as the speech reference model; column 4 lines 41-48. In the specification of this pending application, a Korean character is used. This can be an entire word, therefore word and character are interchangeable.);

c) receiving an input speech sound (using microphone 18 or 62);

d) segmenting the input speech sound into phonemes, and extracting respective feature vectors from the phonemes (During training the words are trained using phonetic HHM models, column 4 line 44. Therefore, in order to compare a word to be

recognized against these phonetic HHM models, it must be segmented into phonemes and the features matched against the models.); and

e) recognizing the speech sound by performing pattern matching between the extracted feature vectors and said stored reference phoneme models of the feature vectors (There are a variety of different speech templates upon which speech recognizer 22 may be based. Hidden Markov Models (HMMs) are popular today and may be used to implement the illustrated embodiment; column 2 line 65. Speech recognizer 22 works in conjunction with a locally stored lexicon 24 of words that may be recognized by the system. The lexicon 24 is arranged such that there is a speech model associated with each word that is recognizable by the system; column 3 line 6.).

11. Consider claim 10, Applebaum teaches the method according to claim 9, wherein said step b) includes the steps of:

segmenting an input speech sound into phonemes (this is inherent as the training is done using phonetic HHM models, column 4 line 44.);

extracting respective feature vectors from the segmented phonemes (the user speaks the word for which the new speech reference model is desired. The system receives the user-supplied word as audio data via the microphone 18. Speech recognizer 22 converts the audio data into a digitized input signal and then into a parameterized intermediate form. In a preferred embodiment of the present invention, the intermediate representation of the word is a vector of parameters representing the short term speech spectral shape of the audio data; column 4 lines 16-24.); and

generating and storing reference phoneme models respectively for the phonemes based on the extracted feature vectors (The reference model server 40 passes the intermediate representation of the word to the reference model training module 50, where a speech model is constructed using the speech model template. To construct a speech model, the reference model training module 50 may decode the time series of parameter vectors in the speech training data by comparison to a set of phonetic Hidden Markov Models, thereby obtaining a phonetic transcription of the utterance in the speech training data. In this case, the transcription serves as the speech reference model; column 4 lines 41-48. In the specification of this pending application, a Korean character is used. This can be an entire word, therefore word and character are interchangeable.).

12. Consider claim 11, Applebaum teaches the method according to claim 10, further comprising the step of:

receiving an input character and displaying the character on a display unit (Figure 2, telephone includes keypad 66 for interesting numbers and other information and display screen for presenting information to the user, column 4 line 66- column 5 line 1.).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. Claim 3, 4, 7, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applebaum in view of Smith et al. (US Patent 6,333,973.).

16. Consider claim 3, Applebaum teaches the mobile communication terminal according to claim 2, further comprising an RF module (inherent in a cell phone 60 figure 2.), but does not specifically teach wirelessly receiving an SMS message containing a character to be displayed on the display unit.

In the same field of cell phone technology, smith teaches wirelessly receiving an SMS message containing a character to be displayed on the display unit (Figure 8A shows a display of a received SMS text message.).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the SMS text messages of Smith with the mobile communication device of Applebaum in order to provide another method of receiving communications.

17. Consider claim 4, Applebaum teaches the mobile communication terminal according to claim 3, wherein the controller segments an input speech sound into phonemes, extracts respective feature vectors from the phonemes, and performs pattern matching between the extracted feature vectors and stored reference phoneme models of respective feature vectors of phonemes, thereby recognizing the input speech sound (There are a variety of different speech templates upon which speech recognizer 22 may be based. Hidden Markov Models (HMMs) are popular today and may be used to implement the illustrated embodiment; column 2 line 65. Speech recognizer 22 works in conjunction with a locally stored lexicon 24 of words that may be recognized by the system. The lexicon 24 is arranged such that there is a speech model associated with each word that is recognizable by the system; column 3 line 6. During training the words are trained using phonetic HHM models, column 4 line 44. Therefore, in order to compare a word to be recognized against these phonetic HHM models, it must be segmented into phonemes and the features matched against the models.)

18. Consider claim 7, Applebaum teaches the method according to claim 5, but does not teach specifically the step of: wirelessly receiving information of a character and displaying the character on a display unit.

In the same field of cell phone technology, Smith teaches wirelessly receiving information of a character and displaying the character on a display unit (Figure 8A shows a display of a received SMS text message.).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the SMS text messages of Smith with the mobile communication device of Applebaum in order to provide another method of receiving communications.

19. Consider claim 8, Smith teaches the method according to claim 7, wherein the information of the character includes an SMS message (Figure 8A shows a display of a received SMS text message.).

20. Consider claim 12, Applebaum teaches the method according to claim 10, but does not teach specifically the step of: wirelessly receiving information of a character and displaying the character on a display unit.

In the same field of cell phone technology, Smith teaches wirelessly receiving information of a character and displaying the character on a display unit (Figure 8A shows a display of a received SMS text message.).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the SMS text messages of Smith with the mobile communication device of Applebaum in order to provide another method of receiving communications.

21. Consider claim 13, Smith teaches the method according to claim 12, wherein the information of the character includes an SMS message (Figure 8A shows a display of a received SMS text message.).

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is listed on the Notice of References Cited.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas C. Godbold whose telephone number is (571) 270-1451. The examiner can normally be reached on Monday-Thursday 7:00am-4:30pm Friday 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DCG

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